

A

HOW TO PREPARE GUIDE

FOR THE

PROFESSIONAL CIVIL ENGINEER II (20434)

EXAMINATION

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I. INTRODUCTION

This booklet is provided to help you prepare for the Professional Civil Engineer II (PCE II) examination. It is very important that you sit down in a quiet place and review the material in this book. You should also set aside time to practice doing the things that are suggested in this booklet to prepare for the examination. Please remember that the material in this booklet is designed to help you prepare for the exam. You will not be allowed to carry this booklet or any other study material into the exam session. Later in this booklet, we will instruct you on what you are **allowed** to bring to the exam session and what you **must** bring to the exam session.

II. JOB ANALYSIS RESULTS

An analysis of the PCE II job indicated that a number of knowledges, skills, and abilities (KSAs) are important and needed from the moment a person becomes a PCE II and before he/she receives any training. Because it is not possible to measure all of these KSAs with an examination, not all will be measured.

When reviewing the KSA statements listed in this booklet, the reader should note that the examples shown in the statements of how the KSAs are used are not intended to be completely inclusive. In other words, there may be questions or exercises on the exam which cover areas not directly mentioned as an example in the KSA.

III. EXAMINATION DESCRIPTION

In an attempt to provide an opportunity for each candidate to demonstrate his/her possession of the knowledges and abilities that will be measured, four exercises were developed.

The four exercises that comprise the PCE II examination are:

- Exercise 1: Project Management Exercise
- Exercise 2: Presentation Exercise
- Exercise 3: Writing Exercise
- Exercise 4: Reading Comprehension Exercise

A description of each exercise will follow in upcoming sections of this booklet.

IV. TEST SCHEDULING

If you are interested in applying for a PCE II position, **you must first file an application with the State Personnel Department.** It is the applicant's responsibility to ensure the application arrives at State Personnel. Tests are given periodically throughout the year. Do not wait for an official announcement from State Personnel or ALDOT about test dates or application cutoff dates. Instead, if you are interested in applying and believe you meet the stated minimum qualifications, you should submit an application immediately.

Once your application is received, it will be reviewed to ensure you have the minimum qualifications required to qualify for the job. If you meet the minimum qualifications, you will be sent a scheduling letter

that will contain the examination dates, times, and location. You will need to call the number indicated on the scheduling letter in order to be scheduled for the PCE II exam.

V. PREPARING FOR THE EXAMINATION

Here are some suggestions regarding what to do before the exam and the items to take to the exam.

- Be well rested. Get a good night's sleep for several nights in a row before the exam.
- Allow plenty of time to get to the exam. If you are rushed and running late, you will be upset when you arrive. Plan to arrive at the scheduled time for check-in. If you are late, you will **NOT** be admitted to the examination site.
- Come to the exam dressed comfortably. You will be there for approximately four and a half hours.
- Do not bring this booklet to the exam location. You will not be permitted to bring it into the testing site.
- Do not bring any of your study materials to the exam. This includes notes and any resources that you may have used to prepare for the exam.
- You should read and study this booklet. You should practice the kinds of things that this booklet suggests that you practice.
- The State Personnel Department will mail you a SCHEDULING LETTER identifying the dates the examination will be given and a phone number to call to schedule your examination time. All tests will be given in Montgomery at the State Personnel Department/ALDOT Testing Facility located at 3738 Atlanta Highway. You **MUST** call the number provided on the scheduling letter **PRIOR TO THE DEADLINE** indicated on the scheduling letter in order to be allowed to take the examination.
- Approximately five to seven days prior to the exam, the State Personnel Department will mail you a CONFIRMATION POSTCARD identifying the date, time, and location that you have scheduled to take the examination. You **must** bring this CONFIRMATION POSTCARD with you to the exam site.
- You **must** also bring a PICTURE IDENTIFICATION to the exam location. This picture identification may be a valid driver's license, student identification card, a military identification card, or a passport. You only need to have one form of PICTURE IDENTIFICATION. You will **not be allowed** to enter the exam location, nor take the PCE II exam without your PICTURE IDENTIFICATION. During registration at the test site, you will be asked to verify the last four digits of your Social Security Number.
- If you want to keep track of time during the examination, you should bring a watch or a small clock to the exam.
- Do not bring your own calculator. You will be provided with a small solar powered or battery operated calculator that performs basic functions such as addition, subtraction, multiplication, division, and percentages. You must use the provided calculator.
- You will be provided with pencils.
- Do not bring cell phones, two-way radios, or any other noise producing devices with you to the test room. If you do bring a cell phone or two-way radio, you will not be allowed to keep it during the exam.

VI. DURING THE EXAMINATION

General Guidelines

We are now going to review some guidelines that you will be expected to follow when you come to take the PCE II examination.

- During the entire exam, you will be seated in a private test room. At certain points, an exam monitor will enter the room and at one point a person playing the role of your supervisor will enter the room. During the remainder of the exam, no one will be in the room but you. Your exam monitor will be outside your test room and will be available to assist you if you have any problems. If you leave your test room, even to use the rest room, you **will not** be provided with any additional examination time.
- You will be given 4 hours and 25 minutes to read the instructions and complete all four exercises.
- A 10-minute break period has been built into the 4 hour and 25 minute exam time. This break is optional.
- Exam monitors will not interpret exam questions for you.
- You are not allowed to open any exam booklets or begin working on the exam until you are instructed to do so.
- You may not refer to any outside reference materials during the exam.
- Candidates making any disturbances or caught cheating will be disqualified from the exam.
- For one exercise, you will be asked to write a memorandum. You must write legibly so that test raters can properly evaluate your response.
- All needed materials (e.g., pencil, calculator) will be provided.
- As indicated above, the PCE II examination is made up of four exercises. You will take all four exercises on the same day.
- It is important to remember that the PCE II job covers a wide variety of duties and responsibilities. The test was designed to reflect that diversity without overly targeting a particular area. Candidates placed on the register for PCE II can be considered for any available PCE II job in any area. While it is impractical to create a test which measures every aspect of every PCE II job, it was the goal of this examination development project to develop a test that will measure important and necessary-at-entry aspects of positions in the PCE II class.

VII. EXERCISE DESCRIPTIONS

Exercise One: Project Management Exercise

During this exercise, you will be assigned a project and be required to plan the project to include assigning staff, equipment, and supplies. You will also be given a budget and a deadline for the project.

To complete the exercise, you will fill out a daily schedule in which you will detail the number/amount of employees, equipment, and supplies assigned each day. You will also be tasked with calculating the amount of the project's budget you spend each day. Information will be presented to you in the form of memorandums, written instructions, and tables.

The exercise will be scored based on how efficiently and effectively you schedule your resources and the decisions you make regarding the project.

The Project Management Exercise was specifically written to measure these targeted abilities:

- Perform basic mathematical functions such as addition, subtraction, multiplication, division, and calculation of percentages.
- Interpret and analyze numerical/statistical information, charts, and tables and draw conclusions.
- Identify problems and determine their causes.
- Analyze and integrate complex data from multiple sources.
- Construct resourceful solutions to complex problems.
- Evaluate the pros and cons of alternatives and recommend solutions.
- Judge when to refer a decision to a superior and when supervisory approval is necessary before decisions are implemented.
- Identify and anticipate the likely consequences of implementing various courses of action in a particular situation.
- Make decisions/recommendations and provide sound rationale/explanations for decisions and actions.
- Assess a situation and make decisions with a limited amount of information.
- Make decisions in crisis or time-sensitive situations.
- Interpret directions/instructions received from others and respond appropriately.
- Establish and meet goals and objectives in a timely and efficient manner.

- Work under time constraints or deadlines.
- Organize and plan work activities.
- Manage one's own time to ensure work responsibilities are accomplished.
- Set priorities for individuals to accomplish goals and complete assignments in a timely manner.
- Identify alternative procedures for accomplishing goals when existing procedures are no longer possible or adequate.
- Attend to several situations, problems, responsibilities, and projects at the same time.
- Persevere in completing tasks in which progress is slow, frustrating, or discouraging.
- Remain flexible as needed to respond to changing situations, assignments, and priorities.
- Work independently without the direct supervision of others.
- During the job analysis, these 22 abilities were shown to be important and necessary upon entry into the PCE II job class.

Exercise Two: Presentation Exercise

During the Presentation Exercise, you will be tasked with providing information to your supervisor regarding the project you were assigned during the Project Management exercise. During the Presentation Exercise, an actual person will come into your test room and play the role of your supervisor. The meeting will be videotaped for future scoring.

During the meeting, you will provide the person playing the role of your supervisor with the information you feel is pertinent. The role player will not ask any questions but will simply listen to your presentation.

You will be scored on the content of what you say and your oral communication and presentation skills.

The Presentation Exercise was written to measure these targeted abilities:

- Communicate with others using graphs, pictures, or other illustrations.
- Communicate orally with individuals such as ALDOT employees, government officials, the general public, and consultants in a manner that the message can be understood and acted upon.
- Adapt and/or adjust oral communication so that it can be understood by individuals of different ages and from a wide variety of socioeconomic, ethnic, cultural, racial, and linguistic backgrounds.
- Make effective presentations and speeches to groups in situations such as training classes, public meetings, and committee meetings.
- Persuade others to accept an idea or a point of view.

- Identify key information that should be remembered and/or communicated to others.
- Manage one's own time to ensure work responsibilities are accomplished.
- Set priorities for individuals to accomplish goals and complete assignments in a timely manner.
- Develop and implement contingency plans for performing work.
- Attend to several situations, problems, responsibilities, and projects at the same time.
- Remain calm and maintain a professional demeanor in crisis, stressful, emotional, and unpleasant situations.
- Build rapport and establish trust when interacting with others such as co-workers, subordinates, and contractors.
- Deliver sensitive and/or difficult information in a tactful manner.

During the job analysis, these 13 abilities were shown to be important and necessary upon entry into the PCE II job class.

Exercise Three: Writing Exercise

During this task, you will be required to draft a memorandum to the manager of your section. In this memorandum, you will describe your plan for completing the project that was assigned to you in the Project Management Exercise. All of the information you need to draft the response will be provided to you in the exercise instructions.

During this exercise you will be scored based upon the content of your memo and your written communication skills. Therefore you must decide what information is appropriate to include and make sure your memo contains proper grammar, spelling, sentence structure, etc.

The Writing Exercise was specifically written to measure the following targeted abilities:

- Communicate in written form, and e-mails to individuals such as other ALDOT employees, government officials, the general public, and consultants in a manner that the message can be understood and acted upon.
- Write legibly.
- Persuade others to accept an idea or a point of view.
- Manage one's own time to ensure work responsibilities are accomplished.
- Attend to several situations, problems, responsibilities, and projects at the same time.

During the job analysis, these five abilities were shown to be important and necessary upon entry into the PCE II job class.

Exercise Four: Reading Comprehension Exercise

During this exercise, you will be asked to answer 25 fill-in-the-blank questions. The answers to these questions will be contained within passages of selected ALDOT manuals. You will be provided with the necessary passages.

The Reading Comprehension Exercise was specifically written to measure the following targeted abilities:

- Read and interpret written materials and technical documents such as engineering drawings, specifications, design plans, construction manuals, and legal documents.
- Critically evaluate and analyze written materials and identify the accuracy of the information.
- Acquire (learn) new knowledge from reading materials such as technical manuals, relevant periodicals, and textbooks.

During the job analysis, these three abilities were shown to be important and necessary upon entry into the PCE II job class.

VIII. EXAMINATION TIMING

On your test day, you will be at the test center for approximately four and a half hours. Of this time, 4 hours and 25 minutes will be actual test time. The remaining time will be spent checking in and reading instructions.

During your test time, you will have some freedom in determining what to work on and how long you spend working on each exercise. However, you must stop what you are doing and participate in the presentation exercise exactly 2 hours and 30 minutes after the exam begins.

Obviously, you must prepare for the Presentation Exercise sometime in the first 2 hours and 30 minutes of the exam. The remainder of the test time can be spent however you chose in the completion of the remainder of the exercises. The test monitor will enter your test room and stop the examination exactly 4 hours and 25 minutes after the exam begins. At that time, you must stop working even if you have not finished completely. **If you finish the exam before the 4 hours and 25 minutes time limit, you may notify the monitor and you will be dismissed early.**

IX. HOW TO STUDY FOR THE PCE II EXAMINATION

You should study whatever material you believe will assist you in gaining or improving the KSAs listed in each section. You should practice speaking one-on-one and practice writing letters and memorandums. Have someone critique you as you speak or write.

Some specific ways to study for the exam are given below:

- Set aside certain times when you will be able to study/practice.

- When you do study, keep your mind on what you are doing. Do not try to read where it is noisy or when you are doing something else like watching a child or the television.
- The more you practice the better off you will be. Practicing all at once right before the exam does not work well. You should space your practice over the time you have until you take the exam.

We have presented these study guidelines to help you prepare to take the PCE II Qualifying Examination. The more you prepare by reading, studying, and practicing, the better you should do.

X. WHAT TO BRING TO THE PCE II EXAMINATION

Bring your PICTURE IDENTIFICATION and CONFIRMATION POSTCARD when you come to take the exam. No photocopied IDs will be accepted. Examples of accepted picture IDs are a valid driver's license, a military identification card, or a student identification card. During registration at the test site, you will be asked to verify the last four digits of your Social Security Number.

Bring snacks, and drinks, if you think they are needed. You will be at the test building for approximately four and a half hours and will not be allowed to leave the building. There are no vending machines in the test facility.

Bring a wristwatch or small clock if you want to keep track of time. Please turn off any alarm before you get to the testing facility.

Do not bring your own calculator. Calculators will be provided at the testing facility.

You will be provided with pencils and pens so you do not need to bring pencils or pens with you.

Do not bring any personal notes or study material that you used to prepare for the exam to the exam site.

Do not bring cell phones, two-way radios, or any other noise producing devices into the examination building. You will not be allowed to bring them into the test room.

Do not bring children or any other visitors to the exam. They will not be admitted to the test site.

XI. ADMINISTRATION INFORMATION

Administration Contact

The contact for the PCE II examination administration is Karen Walkley at (334) 242-3692.

Reasonable Accommodation

If you would like to request special testing accommodations or have any questions concerning the examination site or examination conditions, please contact us at the phone number above.

Administrative Questions

You may contact us if you have any administrative questions or concerns about information presented in this booklet. Exam administrators are not allowed to divulge specific information about the content of the exam.

Test Results

It is not necessary for you to contact us in order to receive your grade; you should receive notification of your score on the exam by postcard when it is available.

Once the register is established, you may obtain your standing on the register online at www.personnel.alabama.gov. From the homepage, you should click on “Applicants” and then “Register Standings”, and follow the instructions. For security purposes, you must create an online profile in order to access your standings.

Reminders

It is the applicant’s responsibility to ensure their application arrives at State Personnel. Tests are given periodically throughout the year and there are internal deadlines for the receipt of applications for each test. If you would like to know the deadline for a particular test, please call State Personnel. State Personnel does not report or provide these internal deadlines in any information sent out to departments so you should not wait for an official announcement from State Personnel or ALDOT about test dates or application cutoff dates. Instead, if you are interested in applying, you should do so as soon as you believe you meet the stated minimum qualifications.

You will not need OR be allowed to bring anything to the exam other than the items previously mentioned.

If you are unable to schedule for this examination or you fail to appear at the examination on your scheduled day and time, you will need to submit a new application to State Personnel in order to be scheduled for future administrations.

**THIS CONCLUDES THE INSTRUCTIONS AND NOTES ON “HOW TO PREPARE” AND TAKE THE
PROFESSIONAL CIVIL ENGINEER II EXAMINATION.**